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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHOI, FRANK I	

ART UNIT	PAPER NUMBER
1616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/849,721	HOCHWALT ET AL.	
	Examiner	Art Unit	
	Frank I. Choi	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *50-55,57-69,71-83,85-98 and 100-107* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *50-55,57-69,71-83,85-98 and 100-107* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 59,73,87,102 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Applicant refers to paragraph 0031 as support for amending the claims to recite about 50% to about 98% of the combined acid and metal. However in said paragraph the zeolite was in the range of 2% to about 50%. The Amendment, however, does not amend the amount of zeolite. As such, the Applicant has not provided evidence that the Specification supports the amendment to said combination without also adjusting the amount of zeolite. Further, the inventor's could not have contemplated a claim in which at about 50% to 98% of the composition is said combination and about 0.3% to about 76% of the composition is zeolite, as claim includes within its scope components that add up to more than 100% of the composition.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 59, 73, 87,102 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention as follows: The claims recite the concentration of about 50% to about 98% of the composition is the combined acid and metal substances and that the zeolite comprises about 0.3% to about 76% of the composition. The amendment renders the claim

inoperable within the range of about 50% to about 76% of zeolite as at least about 50% of the composition must be of said combination of acid and metal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 50-55, 57-69,71-83, 85-98, 100-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-084283 in view of Furio (H1579) and Gioffre et al. (US Pat. 4,795,482)

JP 05-084283 disclose the combination of a copper salt, organic dicarboxylic acid, such as fumaric acid, and a porous absorbent, such as natural silicates and synthetic aluminosilicates, which combination is used as a deodorant (Paragraphs 009-0028). A desired ratio is disclosed of 3:0.2-5:1-20 of copper salt: organic carboxylic acid: a porous absorbent (Paragraph 0035). It is disclosed that the deodorant can be in the form of a powder or granular compound, a molded good, incorporated into a sheet, such as fabric or paper, etc. or between sheets (Paragraphs 0036-0041).

Furio disclose the combination of intermediate ratio SiO2AlO2 zeolite having a SiO2AlO2 ratio of about 10 or less and a high ratio SiO2AlO2 zeolite such as disclosed in US Pat. 4,795,482 for odor control (Column 3, lines 9-15, Column 4, lines 44-68).

Gioffre et al. (US Pat. 4,795,482) disclose that clinoptilolite has a nominal framework SiO2/Al2O3 molar ratio and has been the of about 10 and an zeolite having at least about 90 percent framework of tetrahedral oxides units being Si02 tetrahedra, a sorptive capacity for water

of less than 10 weigh percent when measure at 25 degrees Celsius and 4.6 torr, a pore diameter of at least 5.5 Angstroms, and a SiO2/Al2O3 ratio of about 35 to infinity, preferably 200 to 500, where substantially all the water of hydration has been is removed (Column 2, lies 14-68).

The prior art discloses a composition for controlling odors containing the combination of fumaric acid, a synthetic aluminosilicate and a copper salt, in which the desired ratio of the same is 3:0.2-5:1-20, which can be in the form of a powder or granulate, a molded good or incorporated into sheets or in between sheets. The difference between the prior art the claimed invention is that the prior art does not expressly disclose the use a synthetic zeolite having at least about 90 percent framework of tetrahedral oxides units being Si02 tetrahedra, a sorptive capacity for water of less than 10 weigh percent when measure at 25 degrees Celsius and 4.6 torr, a pore diameter of at least 5.5 Angstroms, where the water hydration has been substantially removed. However, the prior art amply suggest the same as the prior art discloses deodorant compositions and articles containing the combination of fumaric acid, synthetic aluminosilicate and copper salt at the desired ratio of 3:0.2-5:1-20, that a mixture of intermediate zeolite, having a SiO2/Al ratio of SiO2/Al2O3 ratio of about 10 or less, and high zeolite is effective for controlling odor and that clinoptilolite has a ratio of about 10 and that the synthetic zeolite disclosed in US 4,795,482 is a suitable high zeolite and has at least about 90 percent framework of tetrahedral oxides units being Si02 tetrahedra, a sorptive capacity for water of less than 10 weigh percent when measure at 25 degrees Celsius and 4.6 torr, a pore diameter of at least 5.5 Angstroms, where the water hydration has been substantially removed. As such, one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the use of the combination of clinoptilolite and said synthetic zeolite as the natural silicate

and synthetic aluminosilicate in the combination with fumaric acid and copper salt would be effective in controlling odors.

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990) (The prior art taught carbon monoxide concentrations of "about 1-5%" while the claim was limited to "more than 5%." The court held that "about 1-5%" allowed for concentrations slightly above 5% thus the ranges overlapped.); In re Geisler, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997) (Claim reciting thickness of a protective layer as falling within a range of "50 to 100 Angstroms" considered prima facie obvious in view of prior art reference teaching that "for suitable protection, the thickness of the protective layer should be not less than about 10 nm [i.e., 100 Angstroms]." The court stated that "by stating that suitable protection' is provided if the protective layer is about' 100 Angstroms thick, [the prior art reference] directly teaches the use of a thickness within [applicant's] claimed range."). Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of "having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium" as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).

Further, "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller,

220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.); see also In re Peterson, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003). ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.").

In this case, in view of the above case law, the prior art discloses, for example, the combination of a metal salt, an acid, such as fumaric acid and the claimed zeolite, which can be combined with clinoptilolite. A desired ratio of 3:0.2-5:1-20 is disclosed. As such, the prior art range overlaps the amount of about 30-99% of fumaric acid, about 5% to about 50% of synthetic zeolite and about 0.5 to about 40% of the metal substances, the combined acid/metal substance amount of about 30% to about 99%, or about 50% to about 98%, and zeolite of about 0.3% to about 76%. With respect to the other percentages, as indicated above, it would have been well within the skill of ordinary skill in the art to arrive at various mixtures of metal, acid, and synthetic zeolite, or synthetic zeolite and clinoptilolite, since the prior art discloses and/or suggests that combinations of metals, acids and absorbents would be effective in controlling odor and the amounts claimed do not exhibit any unexpected efficacy in the treatment of odors that would be beyond the abilities of one of ordinary skill in the art to arrive at through routine experimentation, i.e. by preparing the combinations and amounts and testing against various odors.

The Examiner has duly considered the Applicant's arguments but deems unpersuasive.

The fact that Applicant does not form the complex copper salt in JP 05-084283, is not the same thing as excluding the complex copper salt in the claims. The claims do not exclude the copper salt from forming once the components are mixed. Further, the claims encompass a metal salt. JP 05-894283 does not disclose that simple metallic salts are ineffective. In fact, paragraph 0003 indicates that metallic salts are useful as deodorants for acid odors. As such, said reference does not teach away from the metal salts other than the specific dicarboxylic salts. "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." In re Gurley, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994). In this case, the JP 05-084283 reference only indicates that the scope of deodorant activity of metallic compounds is generally limited to acid odors whereas the carboxylic acids are generally effective against basic odors as opposed to acidic odors. This in fact would motivate one to combine both metallic compounds and carboxylic acid deriviative deodorants in order to obtain a broader spectrum of activity.

The Applicant requests that the Examiner provide a definition for the term "acid of isolation", however, the said term clearly refers to free organic acid, i.e. non-complexed organic acid. See Patent Astracts of Japan publication of JP 05-084283 that was previously provided with the prior Office Action (10/17/2006).

The Applicant statement that the motivation to combine is traversed is not sufficient to overcome the rejection in that there is no argument other than a summary of the previously addressed argument concerning JP 05-084283. Since JP 05-084283 does not teach away from

the use of metal salts as claimed and Examiner has provided the reasons for combining the references as indicated above, the rejection is maintained.

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is 571-273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (571)272-0610. Examiner maintains a compressed schedule and may be reached Monday, Tuesday, Thursday, Friday, 6:00 am – 4:30 pm (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Johann R. Richter, can be reached at (571)272-0646. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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June 11, 2007

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